

Show ALL work in space provided and *clearly mark final answer* to receive any credit!

Factor out the greatest common factor from the polynomials:

1. $7x - 42y + 7$

2. $b(d^3 + 7) + (d^3 + 7)$

Factor the four-term polynomial by grouping; if possible:

3. $8x^3 - 24x^2 + 7x - 21$

4. $7z^2 - 3xz - 7z + 3x$

5. $5p^2 - 2pq - 10p + 4q$

Factor each polynomial completely; if possible:

6. $x^2 + 8x + 15$

7. $x^2 - 5x - 3$

8. $p^2 + 6pq - 16q^2$

9. $2x^2 + 6x - 56$

10. $20x^2 + 27x + 9$

11. $-40x^3 + 58x^2 - 10x$

$$12. 15y^2 - 26y + 8$$

$$13. x^2 - 14xy + 49y^2$$

$$14. 6x^2 - 11x - 10$$

$$15. 3x^3 + 14x^2 + 15x$$

Factor the following binomials completely:

$$16. x^2 - 16$$

$$17. 9x^2 - 16$$

$$18. x^4 - 16$$

$$19. 16xy^2 - 9x$$

Solve the following equations:

20. $(x+9)(x-3)=0$

21. $x^2+10x-24=0$

22. $3x^2+16x=12$

23. $3x^3 - 4x^2 - 7x = 0$

24. $x(x + 15) = 0$

25. $x^2 + 2x = 0$

Practice Test 1 Chapter 6 Answers

1. $7(x - 6y + 1)$
2. $(d^3 + 7)(b + 1)$
3. $(8x^2 + 7)(x - 3)$
4. $(7z - 3x)(z - 1)$
5. $(5p - 2q)(p - 2)$
6. $(x + 5)(x + 3)$
7. Prime
8. $(p + 8q)(p - 2q)$
9. $2(x + 7)(x - 4)$
10. $(4x + 3)(5x + 3)$
11. $-2x(4x - 5)(5x - 1)$
12. $(3y - 4)(5y - 2)$
13. $(x - 7y)^2$
14. $(2x - 5)(3x + 2)$
15. $x(3x + 5)(x + 3)$
16. $(x - 4)(x + 4)$
17. $(3x - 4)(3x + 4)$
18. $(x + 2)(x - 2)(x^2 + 4)$
19. $x(4y - 3)(4y + 3)$
20. $x = -9 \quad x = 3$
21. $x = 2 \quad x = -12$
22. $x = \frac{2}{3} \quad x = -6$
23. $x = 0 \quad x = \frac{7}{3} \quad x = -1$
24. $x = 0 \quad x = -15$
25. $x = 0 \quad x = -2$